

CLAIMS

1. Device for microbiological examination of a sample of liquid under pressure, having an intake body, a filtering membrane and a drainage body, said intake body having a reservoir, in one wall of which a liquid input aperture
5 is made, said membrane closing said reservoir, said drainage body having means of supporting said membrane on the opposite side from said reservoir and a liquid output aperture, said intake body and said drainage body having integrally moulded mutual locking means; characterised in that said membrane (4) is gripped annularly at the periphery between a first member (9) forming part
10 of said intake body (2) and a second member (32) forming part of said drainage body (3) with one out of said first member and said second member having an elastomer seal (13) by means of which it comes into contact with said membrane (4), and in that said locking means (7, 31) are adapted to allow the opening of said device by requiring only a separation movement between said
15 first member (9) and said second member (32).

2. Device according to Claim 1, characterised in that the membrane (4) is held exclusively on account of it being gripped annularly at the periphery between said first member (9) and said second member (32).

3. Device according to either one of Claims 1 or 2, characterised in
20 that said seal (13) is moulded on to that one out of said first member (9) and said second member (32) which includes it.

4. Device according to any one of Claims 1 to 3, characterised in that it is the first member (9) which has said elastomer seal (13).

5. Device according to Claim 4, characterised in that said first
25 member (9) forms a lateral wall of said reservoir (5) of the intake body (2), said wall (9) finishing at one end in an edge forming part of said seal (13).

6. Device according to Claim 5, characterised in that a groove (14)
is made at the end of a rigid part of said lateral wall (9) while said seal (13) has a T-shaped profile whose longitudinal branch forms a rib (50) inserted into said
30 groove (14) and whose transverse branch forms a cushion (51) which is in contact with the membrane (4).

7. Device according to Claim 6, characterised in that there is a bevel (54) between the rib (50) and the cushion (51) on the external side, while, on the internal side, the rib (50) and the cushion (51) are connected by a straight surface.

5 8. Device according to either one of Claims 6 or 7, characterised in that said cushion (51) has two annular lips (53).

9. Device according to any one of Claims 1 to 8, characterised in that said locking means have means of axial latching (7, 31) between the intake body (2) and the drainage body (3).

10 10. Device according to Claim 9, characterised in that one out of said intake body (2) and said drainage body (3) has at least one axially oriented latching tab (7) while the other has means of receiving (42, 44, 45) said latching tab.

15 11. Device according to Claim 10, characterised in that said latching tab is connected to the remainder of that one out of said intake body (2) and said drainage body (3) which includes it, by a breakable zone.

12. Device according to Claim 11, characterised in that said breakable zone is situated in the region of a dihedral (20) in one of the surfaces (19) of said latching tab (7).

20 13. Device according to Claim 12, characterised in that said surface (19) having a dihedral (20) is situated on the internal side of the latching tab (7).

25 14. Device according to any one of Claims 10 to 13, characterised in that said latching tab (7) extends projecting from the edge of a skirt (6) forming part of that one out of said intake body (2) and said drainage body (3) which includes it.

30 15. Device according to Claim 14, characterised in that that one out of said intake body (2) and said drainage body (3) which has means of receiving said latching tab (7) has a wall (42) oriented transversely and provided with an opening (44) through which the latching tab (7) can pass, said tab and said wall (42) having means (23, 24, 45) for preventing the withdrawal of the tab (7) once it has been pushed right into the opening (44).

16. Device according to Claim 15, characterised in that said means for preventing the withdrawal of the latching tab (7) have, on said wall (42), a tooth (45) oriented axially and bordering said opening and having, on said latching tab, a groove (23) adapted to accommodate said tooth (45).

5 17. Device according to either one of Claims 15 or 16, characterised in that said transversely oriented wall (42) is connected to a lateral wall (43) extending on the opposite side from that one out of said intake body (2) and said drainage body (3) which has the latching tab (7), with the dimension in the axial direction of said lateral wall (43) being greater than the dimension in the
10 axial direction of the latching tab (7).

18. Device according to Claim 17, characterised in that a notch (46) is made in said lateral wall (46) at the level of said opening (44), to make it possible to press on said latching tab (7).

15 19. Device according to any one of Claims 10 to 18, characterised in that it is the intake body (2) which has the latching tab (7), and in that it is the drainage body (3) which has the means of receiving (42, 44, 45) said latching tab (7).

20 20. Device according to any one of Claims 10 to 19, characterised in that one out of said intake body (2) and said drainage body (3) has a number of said latching tabs (7).

21. Device according to Claim 20, characterised in that it has four latching tabs (7).

22. Device according to any one of Claims 9 to 21, characterised in that said locking means comprise exclusively said axial latching means (7, 31).

25 23. Device according to any one of Claims 1 to 22, characterised in that said drainage body (3) has a circular table (30) provided at its centre with means of supporting (48) said membrane (4) and having, around said support means (48), a wall (32) having a surface (33) situated facing said elastomer seal (13), which forms part of said intake body (2), said membrane (4) being
30 squeezed between said surface (33) and said seal (13).

24. Device according to Claim 23, characterised in that said support means (48) have a concave surface facing said membrane (4).

25. Device according to Claim 24, characterised in that the ratio of the difference between the length of the arc corresponding to the profile, in a diametral plane, of said surface of said support means (48) and between the length of the chord of this arc, over the latter length, corresponds to the coefficient of expansion of said membrane (4) between the dry state and the wet state.

26. Device according to any one of Claims 23 to 25, characterised in that said support means are formed by a porous pad (48).

27. Device according to Claim 26, characterised in that said drainage body (3) has drainage channels (39) under said porous pad (48), said drainage channels opening into said output aperture (38).

28. Device according to any one of Claims 23 to 27, characterised in that the external diameter of said circular table (30) corresponds substantially to the internal diameter of a skirt (6) included in said intake body (2), said skirt (6) encircling said circular table (30).

29. Device according to Claim 28, characterised in that areas of extra thickness for wedging (27) are provided between said circular table (30) and said skirt (6).

30. Device according to any one of Claims 23 to 29, characterised in that said drainage body has a skirt (31) disposed in a step with respect to said circular table (30).

31. Device according to Claim 30, characterised in that said skirt (31) has means of latching (42, 44, 45) with said intake body (2).

32. Device according to either one of Claims 30 or 31, characterised in that said skirt (31) of the drainage body (3) has at least one notch (47) adapted to allow the placing of a drainage syringe (64).

33. Device according to any one of Claims 1 to 32, characterised in that said output aperture (38) of the drainage body (3) is in the continuation of the internal passage of a coaxially disposed output pipe (37).

34. Device according to Claim 33, characterised in that said drainage body (3) has, around said output pipe (37), an annular rib (40) tapering towards its end.

35. Method for draining a device according to Claim 34, characterised in that it is placed on a vacuum flask (71) with said output pipe (37) engaged in the central hole (75) of the stopper (74) of said flask and said annular rib (40) resting on this stopper.

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